NOT FOR PRINTED PUBLICATION

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
LUFKIN DIVISION

PERSONAL AUDIO, LLC,	§	
	§	
Plaintiff,	§	
	§	CIVIL ACTION No. 9:09CV111
v.	§	
	§	
APPLE, INC.; SIRIUS XM RADIO, INC.;	§	JUDGE RON CLARK
COBY ELECTRONICS CORP.; and	§	
ARCHOS, INC.,	§	
	§	
Defendants.	§	
	§	

ORDER GRANTING IN PART AND DENYING IN PART PLAINTIFF'S MOTION
FOR RECONSIDERATION OF ORDER DENYING DEFENDANT'S MOTION
FOR SUMMARY JUDGMENT OF INDEFINITENESS

Plaintiff Personal Audio, LLC ("Personal Audio") filed suit against Defendant Apple,

Inc. ("Apple"), claiming infringement of United States Patent Nos. 6,199,076 ("the '076 patent")

and 7,509,178 ("the '178 patent"). The patents-in-suit share a common specification and are

directed toward an audio program player that will play a sequence of audio program segments or

files and accept commands from the user to skip forward or backward in the sequence. A

"sequencing file" defines the sequence of the audio program segments, i.e. the order in which the

segments will be played or what segment comes next when the user issues a command to skip

forward or backward in the sequence.

Apple moved for summary judgment that many claims of the patents-in-suit are invalid

as indefinite under 35 U.S.C. § 112, and the court denied that motion. [*See* Doc. #292, Order

Denying Mot. for Summ. J.] In its order denying summary judgment, the court construed the

claim terms alleged to be indefinite. Personal Audio now moves for reconsideration of two claim

construction issues, namely (1) the issue of whether "usage logging" is necessary algorithmic

structure to perform the function of reproducing a program segment, and (2) the issue of whether

the structure corresponding to the function of "continuously reproducing" program segments

necessarily includes reproducing segments in an "endless loop." [*See* Doc. #302, Mot. to

Reconsider.] For the following reasons, Personal Audio's motion to reconsider is granted with

respect to the usage logging issue and denied with respect to the endless loop issue.

I. MOTION FOR RECONSIDERATION STANDARD OF REVIEW

Neither Personal Audio nor Apple cites the rule of procedure or standard of review that

should apply to reconsideration of the court's claim constructions. The Federal Circuit applies

the law of the regional circuit with respect to procedural matters, unless the matter implicates a

patent law issue. *See Fiskars, Inc. v. Hunt Mfg. Co.*, 279 F.3d 1378, 1381 (Fed. Cir. 2002). This

court therefore considers the general standards applicable to "motions for reconsideration" in the

Fifth Circuit, as well as the fact that the substantive issue that the court has been asked to

reconsider, claim construction, is a patent law matter.

The Federal Rules of Civil Procedure do not specifically provide for a "motion for

reconsideration." *Teal v. Eagle Fleet, Inc.*, 933 F.2d 341, 347 (5th Cir. 1991). However, a court

may reconsider an interlocutory order pursuant to Rule 54(b), which provides that any order or

decision "that adjudicates fewer than all the claims or the rights and liabilities of fewer than all

the parties . . . may be revised at any time before the entry of a judgment." Fed. R. Civ. P. 54(b);

Dos Santos v. Bell Helicopter Textron, Inc. Dist., 651 F. Supp. 2d 550, 553 (N.D. Tex. 2009).

Although there is no precise standard for evaluating a motion to reconsider under Rule 54(b),

whether to grant such a motion rests within the discretion of the court, and the standard is "less exacting" than that applied to a motion to alter or amend a judgment under Rule 59(e) or a motion for relief from judgment under Rule 60(b). *Dos Santos*, 651 F. Supp. 2d at 553; *accord Perry-Bey v. City of Norfolk, Va.*, 678 F. Supp. 2d 348, 374 (E.D. Va. 2009); *Kirt v. Fashion Bug # 3253, Inc.*, 495 F. Supp. 2d 957, 965 (N.D. Iowa 2007).

Thus, a district court may reconsider an interlocutory order "for any reason it deems sufficient, even in the absence of new evidence or an intervening change in or clarification of the substantive law." *Lavespere v. Niagra Mach. & Tool Works, Inc.*, 910 F.2d 167, 185 (5th Cir. 1990), *abrogated on other grounds by Little v. Liquid Air Corp.*, 37 F.3d 1069 (5th Cir. 1994); *Lighting Ballast Control, LLC v. Philips Elecs. N. Am. Corp.*, No. 7:09-CV-29-O, 2010 WL 4946343, at *10 (N.D. Tex. Dec. 2, 2010) (noting, on motion to reconsider claim construction, that Rule 54(b) permits modification of interlocutory rulings "for any reason, so long as the Court is not making a legal error or abusing its discretion"). This "less exacting" standard is in line with Federal Circuit law, which provides that "[d]istrict courts may engage in a rolling claim construction, in which the court revisits and alters its interpretation of the claim terms as its understanding of the technology evolves." *Jack Guttman, Inc. v. Kopykake Enters., Inc.*, 302 F.3d 1352, 1361 (Fed. Cir. 2002).

Nevertheless, although the Rule 54(b) standard is not as stringent as the Rule 59(e) and Rule 60(b) standards, considerations similar to those that underlie review of Rule 59(e) and Rule 60(b) motions may inform the court's analysis of a motion to reconsider under Rule 54(b). *Dos Santos*, 651 F. Supp. 2d at 553; *J & J Sports Prods., Inc. v. Tawil*, No. SA-09-CV-327-XR, 2009 WL 4639670, at *2 (W.D. Tex. Nov. 30, 2009); *accord Kirt*, 495 F. Supp. 2d at 965;

Hansen v. Schubert, 459 F. Supp. 2d 973, 998 n.5 (E.D. Cal. 2006); *Sump v. Fingerhut, Inc.*, 208

F.R.D. 324, 327 (D. Kan. 2002); *see also Brown v. Baylor Healthcare Sys.*, No. H-08-0372,

2009 WL 1342933, at *2 (S.D. Tex. May 11, 2009) (applying Rule 59(e) standard to motion to

reconsider claim construction).

"That is, considerations such as whether the movant is attempting to rehash its previously

made arguments or is attempting to raise an argument for the first time without justification bear

upon the Court's review of the motion for reconsideration."[1] *Dos Santos*, 651 F. Supp. 2d at 553;

see also Ross v. Marshall, 426 F.3d 745, 763 (5th Cir. 2005) (Rule 59(e) motions cannot be used

to raise arguments or legal theories that could, and should, have been raised previously);

Automated Bus. Cos. v. ENC Tech. Corp., No. H-06-1032, 2009 WL 3674507, at *1 (S.D. Tex.

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[1] Personal Audio points out that the court did not conduct a *Markman* hearing with respect to the disputed means-plus-function terms at issue here [*see* Doc. #302 at 1 n.1], and the court will take that fact into account when considering whether the arguments raised in Personal Audio's motion for reconsideration could or should have been raised previously. To the extent that Personal Audio objects to the fact that a *Markman* hearing was not held, the court notes that there is no requirement to conduct a *Markman* hearing as part of the claim construction process. While *Markman* hearings may be useful, they are not always necessary. *Ballard Med. Prods. v. Allegiance Healthcare Corp.*, 268 F.3d 1352, 1358 (Fed. Cir. 2001). "District courts have wide latitude in how they conduct the proceedings before them, and there is nothing unique about claim construction that requires the court to proceed according to any particular protocol." *Id.*; *J.G. Peta, Inc. v. Club Protector, Inc.*, 65 F. App'x 724, 727 n.2 (Fed. Cir. 2003) (unpublished table decision) (no requirement to conduct *Markman* hearing); *Leoutsakos v. Coll's Hosp. Pharmacy, Inc.*, 51 F. App'x 310, 312 (Fed. Cir. 2002) (unpublished table decision) ("[A] district court may approach claim construction in any way it deems best . . . ."). In this case, the court conducted a *Markman* hearing regarding the construction of those disputed claim terms not alleged to be indefinite. With respect to the means-plus-function terms at issue in Apple's summary judgment motion, the court concluded that a second *Markman* hearing was not necessary based on the court's understanding of the technology and the ample briefing provided by the parties. [*See* Docs. #191 & #193, Notice of Pl.'s Tech. Synopsis; Doc. #194, Notice of Def.'s Tech. Synopsis; Docs. #148 & #170, Orders Re: Technical Advisor; Doc. #164, Mot. for Summ. J.; Doc. #174, Pl.'s Resp; Doc. #178, Def.'s Reply; Doc. #185, Pl.'s Sur-reply; Doc. #163, Pl.'s Cl. Constr. Br. at 15-29; Doc. #175, Def.'s Responsive Br. at 18-34; Doc. #184, Pl.'s Reply Br. at 7-10.]

Oct. 30, 2009) (in absence of newly-discovered evidence or intervening change in controlling

law, reviewing motion to reconsider claim construction for "manifest error of law or fact").

II. APPLICABLE LAW

The claim terms at issue are means-plus-function limitations that fall under 35 U.S.C.

§ 112 ¶ 6. That paragraph states that:

> An element in a claim for a combination may be expressed as a means or step for
> performing a specified function without the recital of structure, material, or acts in
> support thereof, and such claim shall be construed to cover the corresponding
> structure, material, or acts described in the specification and equivalents thereof.

35 U.S.C. § 112. The first step in construing a means-plus-function limitation is to identify the

function of the limitation. *Minks v. Polaris Indus., Inc.*, 546 F.3d 1364, 1377 (Fed. Cir. 2008)

(citing *Tex. Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1208 (Fed. Cir. 2002)). The next

step is to identify the corresponding structure in the written description necessary to perform that

function. *Id.*

Structure disclosed in the specification is "corresponding" structure only if the

specification or prosecution history clearly links or associates that structure to the function

recited in the claim. *Id.* "Features that do not perform the recited function do not constitute

corresponding structure and thus do not serve as claim limitations." *Northrop Grumman Corp. v.*

Intel Corp., 325 F.3d 1346, 1352 (Fed. Cir. 2003). The court may not import into the claim

structures that are unnecessary to perform the claimed function. *Id.*; *see also Omega Eng'g, Inc.*

v. Raytek Corp., 334 F.3d 1314, 1321 (Fed. Cir. 2003) ("[T]he structure must be necessary to

perform the claimed function.").

In cases such as this where the inventor has invoked means-plus-function claiming for a

computer-implemented function, the corresponding structure is the algorithm disclosed in the

specification for performing the claimed function. *See Aristocrat Techs. Austl. Pty Ltd. v. Int'l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008); *Harris Corp. v. Ericsson Inc.*, 417 F.3d 1241, 1249 (Fed. Cir. 2005); *WMS Gaming Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999). Patentees are permitted to express such algorithms in any understandable terms including as a mathematical formula, in prose, as a flow chart, or in any other manner that provides sufficient structure. *Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1340 (Fed. Cir. 2008).

III. DISCUSSION

As a preliminary matter, Personal Audio points out that, in ruling on Apple's indefiniteness motion, the court did not adopt the claim constructions proposed by either of the parties. [*See* Doc. #302 at 1.] It is not improper for a court to adopt its own view regarding the correct meaning of a disputed claim term. In fact, "the trial judge has an independent obligation to determine the meaning of the claims, notwithstanding the views asserted by the adversary parties." *Exxon Chem. Patents, Inc. v. Lubrizol Corp.*, 64 F.3d 1553, 1555 (Fed. Cir. 1995). In the exercise of its duty to construe disputed claim terms, a court may determine that neither party's proffered claim construction is completely correct. *See id.* In this case, while the court agreed with Personal Audio that the claim terms at issue are not indefinite and found Apple's proposed constructions to be overly detailed in some instances, the court also found that many of Personal Audio's proposed constructions did not adequately set forth the algorithms for performing the claimed functions as described in the patents' shared specification.

The court now turns to the two specific objections that Personal Audio raises in its motion for reconsideration: (1) whether "usage logging" is necessary algorithmic structure to

perform the function of reproducing a program segment, and (2) whether the structure

corresponding to the function of "continuously reproducing" program segments necessarily

includes reproducing segments in an "endless loop."

A. Usage Logging

The claimed functions of the terms at issue involve reproducing audio program segments

in the order established by the sequencing file, and reproducing audio program segments selected

from the sequencing file using "Skip," "Back," and "Go" commands. In defining the algorithmic

structures corresponding to the function of reproducing program segments, the court included in

its various constructions the step of recording in a "usage log file" the ProgramID and start time

of each new audio program segment being reproduced.

For example, the court construed the structure corresponding to the function of

"continuously reproducing said program segments in the order established by said sequence in

the absence of a control command" in claim 1 of the '076 patent as follows:

> The structure corresponding to the "continuously reproducing" function is the
> following structure and equivalents thereof:
> > A sound card that includes a digital to analog converter; headphones or one
> > or more speakers; and a general purpose computer programmed to perform
> > the algorithm that is illustrated in the flow chart of Figure 3 at items 233,
> > 235, 237, 239, and 261 and more fully described at column 12, line 16 to
> > column 13, line 11 and column 34, line 28 to column 35, line 44.
> > Specifically, this algorithm includes the following steps:
> > > (1) beginning playback with the program segment identified by the
> > > ProgramID contained in the Selection_Record specified by the
> > > CurrentPlay variable;
> > > (2) when the currently playing program segment concludes, incrementing
> > > the CurrentPlay variable by one, fetching and playing the program
> > > segment identified by the ProgramID contained in the next
> > > Selection_Record in the sequencing file, **and recording that
> > > segment's ProgramID and start time in a usage log file**;
> > > (3) repeating step (2) until the last Selection_Record in the sequencing
> > > file is reached, which resets the CurrentPlay variable to "1" to begin

the playing sequence again with the first Selection_Record in the sequencing file.

[Doc. #292 at 22 (emphasis added).][2]

Personal Audio argues that "usage logging" is not necessary to perform the functions claimed in the terms at issue, and that the court improperly imported the usage logging step into its definitions of the claims' corresponding structures. [*See* Doc. #302 at 2-5.] Figure 3 of the patents' specification is a flow chart that discloses the basic steps that occur during the claimed player's playback operation. *See* U.S. Patent No. 6,199,076, fig. 3 (filed Oct. 2, 1996). The court included the usage logging step in its constructions based on certain boxes shown in this flow chart and the accompanying description in the specification. Namely, with respect to the "continuously reproducing" and "continuously delivering" terms, the usage logging step was included on the basis of box **239** ("Handle New Segment"), and with respect to the terms claiming the function of responding to commands, the usage logging step was included on the basis of box **267** ("Record Segment End and New Start").

With respect to the "Handle New Segment" box, the specification describes that the "new segment handling procedure" indicated by box **239** includes the steps of (1) identifying the next program segment in the sequencing file to be played, (2) starting that program segment, and (3) recording the segment's ProgramID and start time in a usage log file. [Doc. #292 at 17 (citing '076 patent, col. 13, ll. 8-11; *id.* at col. 12, ll. 61-62).] Similarly, the specification

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[2] The "usage logging" step also appears in the court's constructions of the "means responsive" terms in claims 1, 2, 3, 14, and 15 of the '076 patent [*see* Doc. #292 at 30-31], the "processor for continuously delivering" term in claim 1 of the '178 patent [*see* Doc. #292 at 43], and the terms claiming a processor for responding to commands in claims 1, 4, 5, 6, 7, and 14 of the '178 patent [*see* Doc. #292 at 45-46, 47, 48-49, 51-53, 53-56].

describes that in response to commands to "Go" to a specific program segment or to "Skip" or go

"Back" to a different program segment, the player will (1) record the start of the new segment in

a usage log file as indicated at box **267**, (2) reset the playback position to the new program

segment as indicated at box **269**, and (3) continue playback from the start of the new segment as

indicated at box **235**. [*See, e.g.*, Doc. #292 at 45 (describing "Go" command and citing

'178 patent, col. 14, ll. 35-39).]

1.   *Only structures that are necessary to perform the claimed functions should be included in the court's constructions.*

Upon reconsideration, the court agrees with Personal Audio that it erred by including the

usage logging step in its constructions. This step is not necessary for the player to perform the

claimed functions of reproducing audio program segments in the order established by the

sequencing file and in response to "Skip," "Back," and "Go" commands. Although the

specification describes that the player stores certain data in the usage log file each time it begins

a new program segment, the usage logging step is not clearly linked or associated with the

function of program segment reproduction.

Rather, the storage of data in the usage log is necessary to perform other functions that

are described in the specification but not claimed in the limitations at issue here. The patents'

specification describes that the usage log file is maintained by the player for uploading to the

host server, which can then use the data in the log file to perform accounting and billing

functions and to select new programming based on the user's preferences. *See* '076 patent, col.

11, l. 65 to col. 12, l. 2 ("[T]he host system can be programmed to require the receipt of an

uploaded usage log (from which subscriber and advertising charges and content provider

payments can be determined) . . . ."); *id.* at col. 13, ll. 45-47 ("[Usage log] data can be used to

infer preferences and dislikes which can be used to better select desired programming to be

included in future download compilations."); *id.* at col. 16, ll. 61-63 ("In all cases, each

transition to a new program segment is recorded into the usage log *for later uploading to the*

server and subsequent processing." (emphasis added)). Nowhere does the specification indicate

that usage logging is necessary for playback or reproduction of an audio program segment, or for

navigating among segments in the sequencing file.

Although both Personal Audio and Apple included box **239** ("Handle New Segment") in

their proposed constructions [*see, e.g.*, Doc. #197-1, '076 Proposed Cl. Constrs. at 4-6 (proposed

constructions for "means for continuously reproducing" term)], the court should have included in

its constructions only those steps of the "new segment handling procedure" that are necessary to

perform the claimed functions. *See Motorola, Inc. v. VTech Commc'ns, Inc.*, No. 5:07CV171,

2009 WL 2026317, at *24 (E.D. Tex. July 6, 2009) (court need only include algorithmic steps

that correspond to claimed function, and not steps that relate to functions beyond function

claimed). And neither party's proposed constructions mention usage logging.

Likewise, with respect to the terms claiming the function of responding to commands, it

is proper to omit the step indicated by box **267** ("Record Segment End and New Start") if that

step is not necessary to perform the claimed functions at issue. *See Garmin Ltd. v. TomTom, Inc.*,

No. 06-C-0062-C, 2006 WL 6005801, at *3 (W.D. Wis Aug. 24, 2006) ("[N]ot every portion of

the flowcharts are necessarily included to perform the function. Rather, only those specific

flowcharts, or portions of flowcharts necessary to perform the various means responsive

limitations disclosed in each of the claims are incorporated as limitations on the claims."

(quoting *Itron, Inc. v. Benghiat*, 169 F. Supp. 2d 1073, 1092-93 (D. Minn. 2001))). Neither

Personal Audio nor Apple included box **267** in their proposed constructions. [*See, e.g.*, Doc.

#197-1 at 7-9 (proposed structures for function of responding to "Skip" command).]

Because neither party included usage logging or box **267** in its proposed constructions,

this is not an issue that Personal Audio was on notice of and could have addressed in its prior

briefing. In response to the motion to reconsider, Apple argues that usage logging is "essential to

the claimed functions" because the usage log file is used to create the claimed sequencing file,

which is in turn used to determine the order in which program segments are reproduced.

[*See* Doc. #317, Def.'s Resp. to Mot. to Reconsider at 2-3.] As noted above, the specification

does describe that the usage log file can be used by the host server to create a new sequencing

file for download to the claimed player. However, the claim limitations at issue do not claim the

function of creating the sequencing file.[3] Rather, they merely claim various means for utilizing

the sequencing file to navigate among and reproduce audio program segments. Usage logging is

not necessary to perform the claimed functions.

2.   *The motion to reconsider is granted with respect to the usage logging issue.*

Because the usage logging step is not necessary for the player to perform the claimed

functions, Personal Audio's motion to reconsider is granted with respect to the usage logging

issue. The court modifies its prior claim constructions as follows:[4]

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[3] Selection of programming by the host server based on user preferences is described in other claim limitations not at issue and in certain dependent claims. *See, e.g.*, '178 patent, col. 48, ll. 18-21 (claim 14, limitation describing communications port for downloading from server sequencing file "selected by or on behalf of" listener); *id.* at col. 47, ll. 62-66 (dependent claim 13, claiming player where downloaded files are selected by server based on listener's past data and preferences). This feature is separate from the claimed functions involving reproduction of program segments.

[4] Deletions are indicated by ~~strikeout~~, and insertions are indicated by <u>underline</u>.

a. **"Means for continuously reproducing said program segments in the order established by said sequence in the absence of a control command"** in claim 1 of the '076 patent is a means-plus-function limitation.

The function is "continuously reproducing said program segments in the order established by said sequence in the absence of a control command."

The structure corresponding to the "continuously reproducing" function is the following structure and equivalents thereof:

A sound card that includes a digital to analog converter; headphones or one or more speakers; and a general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items 233, 235, 237, 239, and 261 and more fully described at column 12, line 16 to column 13, line 11 and column 34, line 28 to column 35, line 44. Specifically, this algorithm includes the following steps:

(1) beginning playback with the program segment identified by the ProgramID contained in the Selection_Record specified by the CurrentPlay variable;

(2) when the currently playing program segment concludes, incrementing the CurrentPlay variable by one~~;~~ _and_ fetching and playing the program segment identified by the ProgramID contained in the next Selection_Record in the sequencing file~~, and recording that segment's ProgramID and start time in a usage log file~~;

(3) repeating step (2) until the last Selection_Record in the sequencing file is reached, which resets the CurrentPlay variable to "1" to begin the playing sequence again with the first Selection_Record in the sequencing file.

b. **"Means responsive to said first command for discontinuing the reproduction of the currently playing program segment and instead continuing the reproduction at the beginning of a program segment which follows said currently playing program in said sequence"** in claim 1 of the '076 patent is a means-plus-function limitation.

The function is "in response to a 'Skip' command, discontinuing the reproduction of the currently playing program segment and instead continuing the reproduction at the beginning of a program segment which follows said currently playing program in said sequence."

The structure corresponding to the claimed function is the following structure and equivalents thereof:

A general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items ~~267, 269,~~ and 235 and more fully described at column 15, lines 21 to 25 and column 34, line 28 to column 35, line 48. Specifically, this algorithm includes the following steps:

    (1) scanning forward in the sequencing file to locate the next Selection_Record of the appropriate LocType;

    (2) resetting the CurrentPlay variable to the record number of that Selection_Record ~~and recording in a usage log file the end of the currently playing program segment and the start of the program segment identified by the ProgramID contained in the new Selection_Record~~; and

    (3) fetching and playing the program segment identified by the ProgramID contained in the new Selection_Record.

c. **"Means responsive to a single one of said second commands for discontinuing the reproduction of the currently playing program segment and instead continuing the reproduction at the beginning of said currently playing program"** in claim 2 of the '076 patent is a means-plus-function limitation.

The function is "in response to a single 'Back' command, discontinuing the reproduction of the currently playing program segment and instead continuing the reproduction at the beginning of said currently playing program."

The structure corresponding to the claimed function is the following structure and equivalents thereof:

A general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items ~~267, 269,~~ and 235 and more fully described at column 15, lines 49 to 59. Specifically, this algorithm includes the following steps:

    (1) if the currently playing program segment has played for a predetermined amount of time, resetting the playback position to the beginning of the program segment ~~and recording in a usage log file the end and new start of the segment~~; and

    (2) playing the program segment from its beginning.

d. **"Means responsive to the detection of two consecutive ones of said second commands for discontinuing the reproduction of the currently playing program segment and instead continuing the reproduction at the beginning of a program segment which precedes the currently playing program segment"** in claim 3 of the '076 patent is a means-plus-function limitation.

The function is "in response to two consecutive 'Back' commands, discontinuing the reproduction of the currently playing program segment and instead continuing the reproduction at the beginning of a program segment which precedes the currently playing program segment."

The structure corresponding to the claimed function is the following structure and equivalents thereof:

> A general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items ~~267,~~ 269, 235, 261, 262, and 278 and more fully described at column 15, lines 49 to 59 and column 34, line 28 to column 35, line 53. Specifically, this algorithm includes the following steps:
>> (1) in response to a first "Back" command, if the currently playing program segment has played for a predetermined amount of time, resetting the playback position to the beginning of the program segment, ~~recording in a usage log file the end and new start of the segment,~~ and playing the program segment from its beginning;
>> (2) in response to a second "Back" command, if the currently playing program segment has not yet played for said predetermined amount of time, scanning backward in the sequencing file to locate the previous Selection_Record of the appropriate LocType;
>> (3) resetting the CurrentPlay variable to the record number of that Selection_Record ~~and recording in a usage log file the end of the currently playing program segment and the start of the program segment identified by the ProgramID contained in the new Selection_Record~~; and
>> (4) fetching and playing the program segment identified by the ProgramID contained in the new Selection_Record.

e. **"Processing means responsive to a first one of said control commands for discontinuing the translation of the currently playing program segment and instead continuing the translation at the beginning of the next program segment in said sequence"** in claim 14 of the '076 patent is a means-plus-function limitation.

The function is "in response to a 'Skip' command, discontinuing the translation of the currently playing program segment and instead continuing the translation at the beginning of the next program segment in said sequence."

The structure corresponding to the claimed function is the following structure and equivalents thereof:

A general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items ~~267, 269,~~ and 235 and more fully described at column 15, lines 21 to 25 and column 34, line 28 to column 35, line 48. Specifically, this algorithm includes the following steps:

> (1) **scanning forward in the sequencing file to locate the next Selection_Record of the appropriate LocType;**
>
> (2) **resetting the CurrentPlay variable to the record number of that Selection_Record ~~and recording in a usage log file the end of the currently playing program segment and the start of the program segment identified by the ProgramID contained in the new Selection_Record~~; and**
>
> (3) **fetching and playing the program segment identified by the ProgramID contained in the new Selection_Record.**

f. **"Processing means responsive to a second one of said control command for discontinuing the translation of the currently playing program and instead continuing the translation at the beginning of said currently playing program"** in claim 14 of the '076 patent is a means-plus-function limitation.

The function is "in response to a 'Back' command, discontinuing the translation of the currently playing program and instead continuing the translation at the beginning of said currently playing program."

The structure corresponding to the claimed function is the following structure and equivalents thereof:

> **A general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items ~~267, 269,~~ and 235 and more fully described at column 15, lines 49 to 59. Specifically, this algorithm includes the following steps:**
>
> > (1) **if the currently playing program segment has played for a predetermined amount of time, resetting the playback position to the beginning of the program segment ~~and recording in a usage log file the end and new start of the segment~~; and**
> >
> > (2) **playing the program segment from its beginning.**

g. **"Means responsive to two consecutive ones of said second control commands for discontinuing the translation of the currently playing program and instead continuing the translation at the beginning of a program segment which precedes said currently playing program in said sequence"** in claim 15 of the '076 patent is a means-plus-function limitation.

The function is "in response to two consecutive 'Back' commands, discontinuing the translation of the currently playing program and instead continuing the translation at the beginning of a program segment which precedes said currently playing program in said sequence."

The structure corresponding to the claimed function is the following structure and equivalents thereof:

> A general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items ~~267,~~ 269, 235, 261, 262, and 278 and more fully described at column 15, lines 49 to 59 and column 34, line 28 to column 35, line 53. Specifically, this algorithm includes the following steps:
>
>> (1) in response to a first "Back" command, if the currently playing program segment has played for a predetermined amount of time, resetting the playback position to the beginning of the program segment~~, recording in a usage log file the end and new start of the segment,~~ and playing the program segment from its beginning;
>>
>> (2) in response to a second "Back" command, if the currently playing program segment is near its beginning, scanning backward in the sequencing file to locate the previous Selection_Record of the appropriate LocType;
>>
>> (3) resetting the CurrentPlay variable to the record number of that Selection_Record ~~and recording in a usage log file the end of the currently playing program segment and the start of the program segment identified by the ProgramID contained in the new Selection_Record~~; and
>>
>> (4) fetching and playing the program segment identified by the ProgramID contained in the new Selection_Record.

h. **"A processor for continuously delivering a succession of said audio program files in said collection to said audio output unit in said ordered sequence specified by said sequencing file in the absence of a program selection command from said listener"** in claim 1 of the '178 patent is a means-plus-function limitation.

The function is **"continuously delivering a succession of said audio program files in said collection to said audio output unit in said ordered sequence specified by said sequencing file in the absence of a program selection command from said listener."**

The structure corresponding to the **"continuously delivering"** function is the following structure and equivalents thereof:

A sound card that includes a digital to analog converter and a general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items 233, 235, 237, 239, and 261 and more fully described at column 12, line 22 to column 13, line 16 and column 34, line 19 to column 35, line 32. Specifically, this algorithm includes the following steps:

(1) beginning playback with the audio program file identified by the ProgramID contained in the Selection_Record specified by the CurrentPlay variable;

(2) when the currently playing audio program file concludes, incrementing the CurrentPlay variable by one~~,~~ <u>and</u> fetching and playing the audio program file identified by the ProgramID contained in the next Selection_Record in the sequencing file~~, and recording that audio program file's ProgramID and start time in a usage log file~~;

(3) repeating step (2) until the last Selection_Record in the sequencing file is reached, which resets the CurrentPlay variable to "1" to begin the playing sequence again with the first Selection_Record in the sequencing file.

i. **"A processor . . . for discontinuing the reproduction of the currently playing audio program file and instead continuing the reproduction at the beginning of a listener-selected one of said audio program files in said collection in response to a program selection command from said listener"** in claim 1 of the '178 patent is a means-plus-function limitation.

The function is "in response to a 'Go' command, discontinuing the reproduction of the currently playing audio program file and instead continuing the reproduction at the beginning of a listener-selected one of said audio program files in said collection."

The structure corresponding to the claimed function is the following structure and equivalents thereof:

A general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items ~~267, 269,~~ and 235 and more fully described at column 14, lines 25 to 26; column 14, lines 35 to 39; and column 34, line 19 to column 35, line 52. Specifically, this algorithm includes the following steps:

(1) resetting the CurrentPlay variable to the record number of the listener-selected Selection_Record ~~and recording in a usage log file the end of the currently playing audio program file and the start of the audio program file identified by the ProgramID contained in the new Selection_Record~~; and

(2) **fetching and playing the audio program file identified by the ProgramID contained in the new Selection_Record.**

j. **"Wherein said processor responds to a skip forward program selection command accepted from said listener by discontinuing the reproduction of said currently playing audio program file and instead continuing the reproduction at the beginning of that audio program file which follows said currently audio program file in said ordered sequence specified by said sequencing file"** in claim 4 of the '178 patent is a means-plus-function limitation.

The function is "in response to a 'Skip' command, discontinuing the reproduction of said currently playing audio program file and instead continuing the reproduction at the beginning of that audio program file which follows said currently playing audio program file in said ordered sequence specified by said sequencing file."

The structure corresponding to the claimed function is the following structure and equivalents thereof:

A general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items ~~267, 269,~~ and 235 and more fully described at column 15, lines 25 to 29 and column 34, line 19 to column 35, line 35. Specifically, this algorithm includes the following steps:

(1) **scanning forward in the sequencing file to locate the next Selection_Record of the appropriate LocType;**

(2) **resetting the CurrentPlay variable to the record number of that Selection_Record ~~and recording in a usage log file the end of the currently playing audio program file and the start of the audio program file identified by the ProgramID contained in the new Selection_Record~~; and**

(3) **fetching and playing the audio program file identified by the ProgramID contained in the new Selection_Record.**

k. **"Wherein said processor responds to a skip backward program selection command accepted from said listener at a time when said currently playing audio program file has played for at least a predetermined amount of time by discontinuing the reproduction of said currently playing audio program file and instead continuing the reproduction at the beginning of said currently playing audio program file"** in claim 5 of the '178 patent is a means-plus-function limitation.

The function is "in response to a 'Back' command accepted at a time when said currently playing audio program file has played for at least a

predetermined amount of time, discontinuing the reproduction of said currently playing audio program file and instead continuing the reproduction at the beginning of said currently playing audio program file."

The structure corresponding to the claimed function is the following structure and equivalents thereof:

A general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items ~~267, 269,~~ and 235 and more fully described at column 15, lines 53 to 63. Specifically, this algorithm includes the following steps:

(1) if the currently playing audio program file has played for a predetermined amount of time, resetting the playback position to the beginning of the audio program file ~~and recording in a usage log file the end and new start of the audio program file~~; and

(2) playing the audio program file from its beginning.

l. "Wherein said processor responds to a skip backward program selection command accepted from said listener at a time when said currently playing audio program file has not yet played for said predetermined amount of time for discontinuing the reproduction of the currently playing program segment and instead continuing the reproduction at the beginning of a program segment which precedes the currently playing program segment in said ordered sequence specified by said sequencing file" in claim 6 of the '178 patent is a means-plus-function limitation.

The function is "in response to a 'Back' command accepted at a time when said currently playing audio program file has not yet played for said predetermined amount of time, discontinuing the reproduction of the currently playing program segment and instead continuing the reproduction at the beginning of a program segment which precedes the currently playing program segment in said ordered sequence specified by said sequencing file."

The structure corresponding to the claimed function is the following structure and equivalents thereof:

A general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items ~~267, 269,~~ and 235 and more fully described at column 15, lines 53 to 63 and column 34, line 19 to column 35, line 40. Specifically, this algorithm includes the following steps:

(1) if the currently playing audio program file has not yet played for said predetermined amount of time, scanning

backward in the sequencing file to locate the previous Selection_Record of the appropriate LocType;

(2) resetting the CurrentPlay variable to the record number of that Selection_Record ~~and recording in a usage log file the end of the currently playing program segment and the start of the program segment identified by the ProgramID contained in the new Selection_Record~~; and

(3) fetching and playing the program segment identified by the ProgramID contained in the new Selection_Record.

m **"Wherein said processor responds to a skip forward program selection command when playing the last audio program file in said ordered sequence specified by said sequencing file by continuing reproduction at the beginning of the first audio program file in said sequence, and responds to a skip backward program selection command accepted at a time when said first audio program file is playing but said first audio program file has not yet played for said predetermined amount of time by continuing reproduction at the beginning of the last audio program in said sequence whereby the reproduction of the audio program files specified by said sequencing file can be skipped from beginning to beginning in both the forward or backward direction in a bidirectional endless loop"** in claim 7 of the '178 patent is a means-plus-function limitation.

The functions are "(a) in response to a 'Skip' command accepted when playing the last audio program file in said ordered sequence, continuing reproduction at the beginning of the first audio program file in said sequence; and (b) in response to a 'Back' command accepted at a time when said first audio program file is playing but has not yet played for said predetermined amount of time, continuing reproduction at the beginning of the last audio program in said sequence."

The structure corresponding to function (a) is the following structure and equivalents thereof:

A general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items ~~267, 269,~~ and 235 and more fully described at column 15, lines 25 to 29 and column 34, line 19 to column 35, line 35. Specifically, this algorithm includes the following steps:

(1) scanning forward in the sequencing file, and when the "R" Selection_Record marking the end of the sequencing file is encountered, resetting the CurrentPlay variable to "1," which is the record number of the Selection_Record containing the ProgramID of the first audio program file in the ordered sequence; <u>and</u>

> (2) ~~recording in a usage log file the end of the currently playing audio program file and the start of the audio program file identified by the ProgramID contained in the new Selection_Record; and~~
> (3) fetching and playing the audio program file identified by the ProgramID contained in the new Selection_Record.

The structure corresponding to function (b) is the following structure and equivalents thereof:

> **A general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items ~~267, 269,~~ and 235 and more fully described at column 15, lines 53 to 63 and column 34, line 19 to column 35, line 40. Specifically, this algorithm includes the following steps:**
>
>> **(1) if the currently playing audio program file has not yet played for said predetermined amount of time, scanning backward in the sequencing file, and when the "R" Selection_Record marking the beginning of the sequencing file is encountered, resetting the CurrentPlay variable to the record number contained in the "R" Selection_Record, which is the record number of the Selection_Record containing the ProgramID of the last audio program file in the ordered sequence; and**
>> **(2) ~~recording in a usage log file the end of the currently playing audio program file and the start of the audio program file identified by the ProgramID contained in the new Selection_Record; and~~**
>> **(3) fetching and playing the audio program file identified by the ProgramID contained in the new Selection_Record.**

n. **"A processor for executing one or more utility programs to perform control functions in response to said input commands from a user, said functions including: (a) in response to a first one of said input commands designating a selected audio program file described on said visual menu listing for causing said audio playback unit to discontinue the reproduction of the currently playing audio program file in said ordered sequence and to instead continue the reproduction at the beginning of said selected audio program file, (b) in response to a second one of said control commands for discontinuing the reproduction of said currently playing audio program file and instead continuing the reproduction at the beginning of that audio program file which follows said currently playing audio program file in said ordered sequence specified by said playback session sequencing file, (c) in response to a third one of said control commands accepted from said listener at a time when said currently playing audio program file has played for at**

least a predetermined amount of time by discontinuing the reproduction of said currently playing audio program file and instead continuing the reproduction at the beginning of said currently playing audio program file, and (d) in response to said third one of said control commands accepted from said listener at a time when said currently playing audio program file has not yet played for said predetermined amount of time for discontinuing the reproduction of the currently playing program file and instead continuing the reproduction at the beginning of that audio program file which precedes the currently playing program segment in said ordered sequence specified by said playback session sequencing file" in claim 14 of the '178 patent is a means-plus-function limitation.

The functions are "(a) in response to a 'Go' command designating a selected audio program file described on said visual menu listing, causing said audio playback unit to discontinue the reproduction of the currently playing audio program file in said ordered sequence and to instead continue the reproduction at the beginning of said selected audio program file; (b) in response to a 'Skip' command, discontinuing the reproduction of said currently playing audio program file and instead continuing the reproduction at the beginning of that audio program file which follows said currently playing audio program file in said ordered sequence; (c) in response to a 'Back' command accepted at a time when said currently playing audio program file has played for at least a predetermined amount of time, discontinuing the reproduction of said currently playing audio program file and instead continuing the reproduction at the beginning of said currently playing audio program file; and (d) in response to a 'Back' command accepted at a time when said currently playing audio program file has not yet played for said predetermined amount of time, discontinuing the reproduction of the currently playing program file and instead continuing the reproduction at the beginning of that audio program file which precedes the currently playing program segment in said ordered sequence."

The structure corresponding to function (a) is the following structure and equivalents thereof:

> **A general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items ~~267, 269,~~ and 235 and more fully described at column 14, lines 25 to 26; column 14, lines 35 to 39; and column 34, line 19 to column 35, line 52. Specifically, this algorithm includes the following steps:**

> > **(1) resetting the CurrentPlay variable to the record number of the user-selected Selection_Record ~~and recording in a usage log file the end of the currently playing audio program file and the start of the audio program file~~**

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identified by the ProgramID contained in the new Selection_Record; and

(2) fetching and playing the audio program file identified by the ProgramID contained in the new Selection_Record.

The structure corresponding to function (b) is the following structure and equivalents thereof:

A general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items 267, 269, and 235 and more fully described at column 15, lines 25 to 29 and column 34, line 19 to column 35, line 35. Specifically, this algorithm includes the following steps:

(1) scanning forward in the sequencing file to locate the next Selection_Record of the appropriate LocType;

(2) resetting the CurrentPlay variable to the record number of that Selection_Record and recording in a usage log file the end of the currently playing audio program file and the start of the audio program file identified by the ProgramID contained in the new Selection_Record; and

(3) fetching and playing the audio program file identified by the ProgramID contained in the new Selection_Record.

The structure corresponding to function (c) is the following structure and equivalents thereof:

A general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items 267, 269, and 235 and more fully described at column 15, lines 53 to 63. Specifically, this algorithm includes the following steps:

(1) if the currently playing audio program file has played for a predetermined amount of time, resetting the playback position to the beginning of the audio program file and recording in a usage log file the end and new start of the audio program file; and

(2) playing the audio program file from its beginning.

The structure corresponding to function (d) is the following structure and equivalents thereof:

A general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items 267, 269, and 235 and more fully described at column 15, lines 53 to 63 and column 34, line 19 to column 35, line 40. Specifically, this algorithm includes the following steps:

(1) if the currently playing audio program file has not yet played for said predetermined amount of time, scanning

> > **backward in the sequencing file to locate the previous Selection_Record of the appropriate LocType;**
> >
> > **(2) resetting the CurrentPlay variable to the record number of that Selection_Record** ~~and recording in a usage log file the end of the currently playing audio program file and the start of the audio program file identified by the ProgramID contained in the new Selection_Record~~**; and**
> >
> > **(3) fetching and playing the audio program file identified by the ProgramID contained in the new Selection_Record.**

B. Endless Loop

The claimed functions of the terms at issue are "continuously reproducing" program segments in the order established by the sequencing file in the absence of a command, and "continuously delivering" audio program files in the order specified by the sequencing file in the absence of a command. In defining the algorithmic structures corresponding to the function of "continuously" reproducing or delivering, the court included in its constructions a step where, when the last Selection_Record in the sequencing file is reached, the playing sequence begins again with the first Selection_Record in the sequencing file.

For example, the court construed the structure corresponding to the function of "continuously reproducing said program segments in the order established by said sequence in the absence of a control command" in claim 1 of the '076 patent as follows:

> The structure corresponding to the "continuously reproducing" function is the following structure and equivalents thereof:
> > A sound card that includes a digital to analog converter; headphones or one or more speakers; and a general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items 233, 235, 237, 239, and 261 and more fully described at column 12, line 16 to column 13, line 11 and column 34, line 28 to column 35, line 44. Specifically, this algorithm includes the following steps:
> > > (1) beginning playback with the program segment identified by the ProgramID contained in the Selection_Record specified by the CurrentPlay variable;

(2) when the currently playing program segment concludes, incrementing the CurrentPlay variable by one, fetching and playing the program segment identified by the ProgramID contained in the next Selection_Record in the sequencing file, and recording that segment's ProgramID and start time in a usage log file;

(3) repeating step (2) until the last Selection_Record in the sequencing file is reached, **which resets the CurrentPlay variable to "1" to begin the playing sequence again with the first Selection_Record in the sequencing file**.

[Doc. #292 at 22 (emphasis added).][5]

Personal Audio argues that "continuously" reproducing program segments simply means that playback proceeds "without interruption" until the end of the sequencing file is reached. [*See* Doc. #302 at 6-7.] Personal Audio asserts that the step in the court's constructions that requires the sequence to repeat itself, such that playback continues in an "endless loop," is not necessary to perform the claimed functions of "continuously reproducing" and "continuously delivering." [*See* Doc. #302 at 6-7.]

The parties originally agreed on the functions of the terms at issue and did not indicate any dispute over the meaning of "continuously." [*See* Doc. 197-1 at 4; Doc. #197-2 at 2.] Although Personal Audio asserts that the endless loop issue was not raised by either party prior to the issuance of the court's summary judgment order [*see* Doc. #302 at 6; Doc. #318, Pl.'s Reply at 5], Apple's proposed structures for the terms at issue explicitly stated that "[t]he sequence file further includes an 'R' record, which includes the Location value 1 . . . . The . . .

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[5] Likewise, the court construed the structure corresponding to the function of "continuously delivering a succession of said audio program files in said collection to said audio output unit in said ordered sequence specified by said sequencing file in the absence of a program selection command from said listener" in claim 1 of the '178 patent to include the algorithmic step of "repeating step (2) until the last Selection_Record in the sequencing file is reached, which resets the CurrentPlay variable to '1' to begin the playing sequence again with the first Selection_Record in the sequencing file." [Doc. #292 at 43.]

algorithm includes software that reads the R record and value 1 and then returns [to] the start of

the sequence file and begins again." [*See* Doc. #197-1 at 6; Doc. #197-2 at 4.] Thus, the endless

loop issue is one that Personal Audio was on notice of and could have addressed in its prior

briefing.[6]

1.   *The only algorithm disclosed is one in which playback continues in an endless loop.*

Upon reconsideration, the court concludes that it did not err by including the endless loop

step in its constructions. The only algorithmic structure disclosed for performing the claimed

functions of "continuously reproducing" and "continuously delivering" includes playing

program segments in an endless loop. The patents' shared specification discloses that (1) at any

given moment, the next item of programming to be played is specified by the CurrentPlay

variable, which holds the record number of a particular Selection_Record in the sequencing file,

'076 patent, col. 34, ll. 28-31; (2) if no command is entered, the CurrentPlay variable is

incremented by one when the currently playing program segment concludes, '076 patent, col. 34,

ll. 45-47; and (3) when the player encounters the last Selection_Record in the sequencing file,

which contains the location value "1," CurrentPlay is reset to "1," and the playing sequence

begins again, '076 patent, col. 35, ll. 40-44.

The specification does not disclose any alternative structure such as a different value that

might be contained in the last Selection_Record in the sequencing file or an alternative

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[6] In fact, Personal Audio did assert in its original claim construction briefing that "an 'R' record, which includes the Location value 1" is a "very specific detail" not required to perform the function claimed by the terms at issue. [*See* Doc. #163 at 26.] However, Personal Audio did not specify or argue that this "detail" is not required to perform the claimed function because "continuously" playing program segments is different than playing program segments in an endless loop.

algorithmic step that might occur when the last record is encountered. Thus, this case is distinguishable from *Creo Products, Inc. v. Presstek, Inc.*, in which the specification disclosed four alternative algorithms corresponding to the computer-implemented function of "offsetting." *See* 305 F.3d 1337, 1345 (Fed. Cir. 2002). In *Creo*, the court held that the correct construction of "means for offsetting" did not require a computer programmed to perform all four of the algorithms, but rather a computer programmed to perform at least one of the alternative algorithms disclosed. *Id.* In the present case, only one algorithm is disclosed—an algorithm that continuously reproduces program segments in an endless loop.

Personal Audio argues that the specification in this case does in fact disclose an alternative algorithm—one where playback simply terminates when the end of the sequencing file is reached. [*See* Doc. #302 at 6, 8.] Personal Audio points to Figure 3 of the patents' specification, specifically box **237** ("Segment Start?"). Personal Audio argues that when the last segment in the sequencing file has been played, the answer to "Segment Start?" is "No," and the disclosed algorithm does not proceed to box **239** ("Handle New Segment"), i.e. the player will not play another segment or repeat the sequence. [*See* Doc. #302 at 8.] According to Personal Audio, at this point in the flow chart, "[t]he player will just wait for a command." [Doc. #302 at 8.]

Box **261** ("Command?") indicates that in the absence of a command, i.e. when the answer to "Command?" is "No," the algorithm will return to box **235** ("Continue Playback"). The algorithm then proceeds to box **237** ("Segment Start?"), box **251** ("Volume Change?"), and then back to box **261** ("Command?"). One interpretation of this figure—the interpretation that is supported by the specification's description of the algorithm—is that, in the absence of a

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command, when the answer to "Segment Start?" is "No," the algorithm simply continues in a

loop in which the currently playing program segment continues to play until its conclusion, at

which point it is time to start the next program segment in the sequence and the answer to

"Segment Start?" becomes "Yes." *See* '076 patent, col. 34, ll. 45-49. When the answer to

"Segment Start?" is "Yes," the algorithm proceeds to box **239** ("Handle New Segment"), and the

player identifies and starts the next program segment in the sequence. *See* '076 patent, col. 13,

ll. 1-3, 8-9. If the end of the sequencing file has been reached, the "next" segment is the first

segment in the sequence. *See* '076 patent, col. 35, ll. 40-45.

It is possible that, as Personal Audio suggests, the flow chart of Figure 3 is broad enough

to encompass both the above-described endless loop algorithm and also an alternative algorithm

in which, when the currently playing program segment concludes and is the last program

segment in the sequence, the answer to "Segment Start?" remains "No," and the playback

algorithm continues in a sort of "wait loop" until a command is entered. However, Figure 3 must

be read in conjunction with the rest of the specification—the disclosed algorithm for performing

the claimed functions of "continuously reproducing" and "continuously delivering" does not

come from Figure 3 alone. In fact, Figure 3 does not even disclose the concept of a sequencing

file.

The basic steps of the playback algorithm outlined in Figure 3 are more fully described in

the text of the specification. The text, and also Figure 5, both disclose that the last Selection_

Record in the sequencing file contains the value "1." *See* '076 patent, col. 35, ll. 40-42; *id.* fig. 5,

item **380**. There is no mention in the specification that the last Selection_Record might contain

an alternative value signaling that playback should terminate at the end of the sequence. And the

text clearly states that when the last Selection_Record is reached, "the playing sequence begins

again." '076 patent, col. 35, ll. 40-44. The court has located no place in the text of the

specification describing an alternative step wherein playback simply ends when the last

Selection_Record in the sequencing file is encountered.[7]

A patentee who has invoked means-plus-function claiming must clearly disclose

particular structure in the specification corresponding to the claimed function. *Aristocrat*, 521

F.3d at 1333. Here, the only playback algorithm that is clearly disclosed in the patents' shared

specification is one in which the playing sequence begins again when the end of the sequencing

file is reached. If the inventors intended to also disclose an alternative algorithm in which

playback terminates when the end of the sequencing file is reached, they did not clearly do so;

Figure 3 alone is not sufficient disclosure. A person of ordinary skill in the art viewing Figure 3

in light of the text of the specification and Figure 5 would understand the disclosed algorithm

corresponding to the claimed functions of "continuously reproducing" and "continuously

delivering" to be an algorithm in which playback continues in an endless loop.

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[7] The specification does describe that "[w]hen play is concluded, a terminating record
indicating the time of turn-off is recorded to enable the duration of the last segment to be
calculated." '076 patent, col. 13, ll. 13-16. Personal Audio points to this sentence and notes that
"[t]here is no mention of any need for a command to conclude play." [Doc. #302 at 8.] However,
there is also no mention that play concludes automatically when the end of the sequencing file is
reached. This particular sentence in the specification simply does not specify what kind of event
might trigger the conclusion of playback. But Figure 3 in conjunction with Figure 5 and the
portion of the specification describing the sequencing file and playback algorithm in detail, *see*
'076 patent, col. 34, l. 23 to col. 35, l. 53, indicate that unless a command is entered, playback
continues in an endless loop.

2.   *The doctrine of claim differentiation cannot override the mandate of Section 112 ¶ 6.*

Personal Audio also argues that the doctrine of claim differentiation "compels the

conclusion that 'continuous play' is distinct from 'endless loop' play." [*See* Doc. #302 at 8-9;

Doc. #318 at 2-4.] Dependent claim 4 in the '076 patent claims "[a] player as set forth in claim **1**

wherein said sequence established by said data forms an endless circular sequence of program

segments." '076 patent, col. 46, ll. 48-50. The presence of a dependent claim that adds a

particular limitation gives rise to a presumption that the limitation in question is not present in

the independent claim. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (*en banc*).

Thus, the presence of dependent claim 4 gives rise to a presumption that the sequence

established by the sequencing file in claim 1 is not limited to "an endless circular sequence."

However, "[c]laim differentiation is a guide, not a rigid rule. If a claim will bear only one

interpretation, similarity will have to be tolerated." *Laitram Corp. v. Rexnord, Inc.*, 939

F.2d 1533, 1538 (Fed. Cir. 1991). In a means-plus-function claim, the definition of

corresponding structure comes from the specification of the patent, and the doctrine of claim

differentiation cannot override the mandate of 35 U.S.C. § 112 ¶ 6. *Id.* "A means-plus-function

limitation is not made open-ended by the presence of another claim specifically claiming the

disclosed structure which underlies the means clause . . . ." *Id.*; *Wenger Mfg., Inc. v. Coating*

Mach. Sys., Inc., 239 F.3d 1225, 1234 (Fed. Cir. 2001) ("[T]he stringencies of a

means-plus-function limitation are not to be avoided by the mere addition of a dependent claim

that recites the corresponding structure disclosed in the specification.").

In *Wenger*, the court found the doctrine of claim differentiation to be applicable where a

dependent claim recited an additional function that was not included in the independent claim.

See 239 F.3d at 1234 (independent claim claimed function of "circulating" air, while dependent claim claimed function of "recirculating" air; "air circulation means" in independent claim need not include structure capable of "recirculating"). In this case, dependent claim 4 places a further limitation on the sequence established by the sequencing file, but does not recite any additional function. The sequencing file is a structure that is utilized in the algorithm disclosed for performing the function of continuous playback. The disclosed algorithm describes that the last record in the sequencing file contains the location value "1." *See* '076 patent, col. 35, ll. 40-42; *id.* fig. 5. Thus, this case is distinguishable from *Wenger*, and is analogous to *Laitram*—claim 4 simply recites a portion of the disclosed structure that underlies the "means for continuously reproducing" clause, namely a sequencing file in which the last record contains the location value "1."

3.   *The motion to reconsider is denied with respect to the endless loop issue.*

Because the only algorithm disclosed in the specification for performing the functions of "continuously reproducing" and "continuously delivering" program segments is an algorithm in which program segments are played in a continuous loop, the court does not find that it erred by construing that algorithm to be the corresponding structure. Personal Audio's motion to reconsider is denied with respect to the endless loop issue.

IV. CONCLUSION

For the foregoing reasons, Personal Audio, LLC's Notice of Objections to the Court's

Claim Construction and Request for Reconsideration on Two Issues [Doc. #302] is hereby

GRANTED IN PART and **DENIED IN PART**.

So **ORDERED** and **SIGNED** this **18** day of **May, 2011.**

_____

Ron Clark, United States District Judge